

Linzer biol. Beitr.	45/1	681-687	31.7.2013
---------------------	------	---------	-----------

## ***Abrolophus anzelmii* nov.sp. (Acari, Prostigmata, Erythraeidae) from Sicily, Italy**

R. HAITLINGER & D. ŁUPICKI

**A b s t r a c t :** *Abrolophus anzelmii* nov.sp. from Sicily is described and illustrated. From among all species of the genus *Abrolophus* this species has the longest tarsus I, tibia III, IP and setae 1a.

**K e y w o r d s :** Acari, Erythraeidae, new species, Sicily.

### **Introduction**

The genus *Abrolophus* BERLESE 1891 is represented by 19 species, based on larvae or adults and larvae, having comb-like seta on palptarsus: *A. quiquiliarus* (HERMANN 1804), *A. longicollis* (OUDEMANS 1910), *A. aitapensis* (SOUTHCOTT 1948), *A. mortensenii* (SOUTHCOTT 1994), *A. humberti* (HAITLINGER 1996), *A. khanjanii* (HAITLINGER & SABOORI 1996), *A. tonsor* (SOUTHCOTT 1996), *A. welbourni* YAO, SNIDER & SNIDER 2000, *A. benoni* (HAITLINGER 2002), *A. bohdani* (HAITLINGER 2003), *A. penelopae* HAITLINGER 2005, *A. iraninejadi* SABOORI & HAJIQANBAR 2005, *A. basumtwiensis* HAITLINGER 2006, *A. unimiri* HAITLINGER 2006, *A. mirabelae* HAITLINGER 2007, *A. marinensis* HAITLINGER 2007, *A. crimensis* HAITLINGER 2008, *A. nyminegabicus* HAITLINGER 2008, *A. montenegrinus* SABOORI, ŠUNDIĆ & PEŠIĆ 2012 and *A. petanovicae* SABOORI, ŠUNDIĆ & PEŠIĆ 2012 (HERMANN 1804, OUDEMANS 1910, SOUTHCOTT 1948, 1994, 1996, HAITLINGER 1996, 2002, 2003, 2005, 2006a, b, 2007a, b, 2008a, b, HAITLINGER & SABOORI 1996, YAO et al. 2000, SABOORI & HAJIQANBAR 2005, SABOORI et al. 2012). To date, from Italy were known only two species having comb-like seta on palptarsus: *A. quisquiliarus* and *A. mirabelae* (HAITLINGER 2007c). In this paper we describe new species based on larva from Sicily.

### **Material and methods**

One larva was collected 16 May 2012 in Sicily from herbaceous plants. This larva was preserved in 70% ethanol and mounted on microscopic slides using Belese's fluid. Measurements (given in micrometers) were made using microscope NIKON Eclipse 50i. Figures were drawn using the same microscope. The terminology and abbreviations follow HAITLINGER (1999) and WOHLTMANN et al. (2007). The holotype is deposited in the Museum of Natural History, Wrocław University (MNHWU), Poland.

## Results

### Family Erythraeidae ROBINEAU-DESVOIDY 1828

#### *Abrolophus anzelmi* nov.sp.

Diagnosis: fD = 46, fV = 22, Ta I 106, Ti III 190, IP 2027, 1a 125, AL 72, L 81, W 75, odontus not divergent.

Material examined: 1 L. Locus typicus: Sicily, Masseria la Chiusa, ~8 km north of San Giuseppe Jato, 16 May 2010 from herbaceous plants; coll. R. Haitlinger. Holotype deposited in MHWU.

Description (larva): Dorsum with 46 weakly barbed setae. Laterally of scutum one pair of circular eye (diameter 18 µm) (Fig. 1). Scutum longer than wide with pair of weakly barbed scutalae and pair of sensillary setae. Anterior setae (AL) somewhat shorter than posterior setae (PL). Anterior sensillary setae (ASens) distinctly shorter than posterior sensillary setae (PSens), both with setules at distal 1/2 (Fig. 3). Ventral side of idiosoma with very long nude setal pair 1a, nude setae 2a (68 µm) and slightly barbed setae 3a (45 µm). Between coxae I and II 6 nude setae, between coxae II and III 11 nude setae and beyond coxae III 22 weakly barbed setae. Coxalae 1b > 3b > 2b, all barbed (Fig. 2).

Gnathosoma with a pair of nude adoral setae cs (12 µm), a pair of short club-shaped supracoxal setae elcp (5 µm) in lateral position. Ventrally two pairs of hypostomal setae as1 (29 µm), as2 (11 µm) and setae bs (20 µm) (Fig. 6), all nude. Palpfemur with blunt process bearing 2 setae, palpgenu with 3 setae and palptibia with small process, 2 setae and accessory claw; all setae nude (Fig. 5). Palptibial claw not divergent (32 µm). Palptarsus with 1 eupathidium (37 µm), 1 solenidion (35 µm), 1 comb-like seta (52 µm), 2 setae with setules and 3 nude setae, one of them is very short (Fig. 4).

Leg setal formula: Leg I: Ta 1ω, 2ζ, 1z, 1ε, 17 (7B, 10N); Ti 2φ, 1κ, 12 (4B, 8N). Ge 1σ, 1κ, 11N; Tf 8 (2B; 6N), Bf 4 (2B; 2N), Tr 2B; Cx 1B (Figs. 7, 10-11). Leg II: Ta 1ω, 2ζ, 18 (6B; 12N), Ti 2φ, 13N, Ge 1σ, 1κ, 9N; Tf 6 (2B; 4N), Bf 4 (2B; 2N), Tr 2B; Cx 1B (Figs. 8, 12). Leg III: Ta 1ζ, 18 (6B; 12N), Ti 1φ, 13 (4B; 9N), Ge 9N; Tf 5 (4B, 1N), Bf 4 (3B, 1N); Tr 2B; Cx 1B (Figs. 9, 13-14).

Leg lengths: leg I 673, II 610, III 744. IP = 2027.

For measurements see Table 1.

Etymology: The name of the species was derived from the name Anzelm.

Remarks: *Abrolophus anzelmi* nov.sp. belongs to the group of species having palptarsus with comb-like seta, Ti III > 90 µm and AL > 64 µm. This group includes: *A. mortenseni*, *A. longicollis* and *A. humberti* (OUDEMANS 1910, SOUTHCOTT 1994, HAITLINGER 1996; measurements for *A. longicollis* after HAITLINGER 1987, 1996). It differs from these species in the presence palptarsus with two setae having long setules. From *A. mortenseni* it differs in number of intercoxalae II-III (11 vs. 27), fV (22 vs. 30), the presence of one paradontus vs. the presence of two paradontus, sensillae ASens placed anterior to the PL scutalae bases vs. ASens placed posterior to the PL scutalae bases, the longer Ti I (156 vs. 124), Ge I (119 vs. 107), Ti II (143 vs. 95), Ge III (132 vs. 113) and Ti III (190 vs. 145); from *A. longicollis* in the longer PL (77 vs. 56-64), 1a (125

vs. 72-88), PsFd (104 vs. 46-60), Ta I (106 vs. 66-78), Ti I (156 vs. 88-106), Ti II (143 vs. 82-100), Ti III (190 vs. 102-126) and shorter ISD (45 vs. 56-64) and from *A. humberti* in number of intercoxalae II-III (11 vs. 17), palpfemur without protuberance vs. palpfemur with protuberance, the longer PL (77 vs. 66), 1a (125 vs. 48-50), PsFd (104 vs. 60-62), GL (183 vs. 134-146), Ta I (106 vs. 62-64), Ti I (156 vs. 78-86), Ti II (143 vs. 72-76 and Ti III (190 vs. 92-104).

### Zusammenfassung

*Abrolophus anzelmii* nov.sp. aus Sizilien wird beschrieben und abgebildet. Von allen Arten der Gattung *Abrolophus* hat diese Spezies den längsten Tarsus I, Tibia III, IP und Setae 1a.

### References

HAITLINGER R. (1987): *Hauptmannia pseudolongicollis* n. sp. (Acari, Prostigmata, Erythraeidae) from Poland. — Pol. Pismo Entom. **57**: 351-355.

HAITLINGER R. (1996): Seven new larval species of mites (Acari, Prostigmata, Erythraeidae and Trombidiidae) from Poland. — Wiad. Parazytol. **42**: 443-460.

HAITLINGER R. (1999): Six new species of *Leptus* LATREILLE, 1796 (Acari, Prostigmata, Erythraeidae) from South-East Asia. — Miscel. Zool. **22**: 51-68.

HAITLINGER R. (2002): A new larval *Hauptmannia* OUDEMANS, 1910 and the first record of *Abrolophus neobrevicollis* ZHANG & GOLDARAZENA, 1996 (Acari: Prostigmata: Erythraeidae) from Madeira. — Syst. Parasitol. **53**: 115-119.

HAITLINGER R. (2003): *Hauptmannia bohdanii* n. sp. from Poland (Acari: Prostigmata: Erythraeidae). — Genus **14**: 603-607.

HAITLINGER R. (2005): Four new species of Erythraeidae (Acari: Prostigmata) and the first record of *Charletonia braunsi* (OUDEMANS, 1910) and *C. brunni* (OUDEMANS, 1910) from Ethiopia. — Rev. Iber. Aracnol. **12**: 79-90.

HAITLINGER R. (2006a): Eight new species and new records of mites (Acari: Prostigmata: Erythraeidae, Trombidiidae, Johnstonianidae) from China including Macao. — Syst. Appl. Acarol. **11**: 83-105.

HAITLINGER R. (2006b): A new genus and nine new larval species (Acari: Prostigmata: Erythraeidae, Eutrombidiidae) from Benin, Ghana and Togo. — Rev. Iber. Aracmol. **14**: 109-127.

HAITLINGER R. (2007a): New records of mites from Corsica and Sardinia, with descriptions of five new species. — Genus **18**: 529-543.

HAITLINGER R. (2007b): New records of mites (Acari: Prostigmata: Erythraeidae, Trombidiidae, Eutrombidiidae) from France, Liechtenstein and Switzerland, with descriptions of three new species. — Syst. Appl. Acarol. **12**: 55-72.

HAITLINGER R. (2007c): New records of mites (Acari: Prostigmata: Erythraeidae, Johnstonianidae, Miicotrombidiidae, Tanaupodidae, Trombidiidae) from Austria, Hungary, Italy and San Marino. — Zesz. Nauk. UP Wrocław. Biologia i Hodowla Zwierząt. LV, **559**: 45-54.

HAITLINGER R. (2008a): New species and records of mites (Acari: Prostigmata: Erythraeidae, Johnstonianidae, Microtrombidiidae, Trombidiidae) from Moldova and Ukraine. — Biologia **63**: 383-394.

HAITLINGER R. (2008b): New records of mites (Acari: Prostigmata: Erythraeidae, Johnstonianidae, Trombidiidae) from west and north Europe, with the description of *Abrolophus nymindegabicus* sp. n. — Zesz. Nauk. UP Wrocław, Biologia i Hodowla Zwierząt. LVI **566**: 51-64.

HAITLINGER R. & A. SABOORI (1996): Seven new larval mites (Acari, Prostigmata, Erythraeidae) from Iran. — Miscel. Zool. **19**: 117-131.

HERMANN J.F. (1804): Mémoire aptérologique. — Strassbourg: 1-144.

SABOORI A. & H. HAJIQANBAR (2005): A new species of larval *Abrolophus* (Acari: Erythraeidae) from Iran. — Syst. Appl. Acarol. **10**: 149-154.

SABOORI A., ŠUNDIČ M., PEŠIĆ V. & M. HAKIMITABAR (2012): Two new species of *Abrolophus* (Acari: Erythraeidae) from Montenegro. — Zootaxa **3205**: 53-62.

SOUTHCOTT R.V. (1948): Larval Smaridiidae (Acarina) from Australia and New Guinea. — Proc. Linn. Soc. N. S. Wales **72**: 252-264.

SOUTHCOTT R.V. (1994): Two new larval Erythraeidae (Acarina) from Thailand, with keys to the larvae of *Leptus* for Asia and New Guinea and world larvae of *Hauptmannia*. — Steenstrupia **20**: 165-176.

SOUTHCOTT R.V. (1996): On some Australian and other larval Callidosomatinae (Acari: Erythraeidae). — Int. J. Acarol. **22**: 253-278.

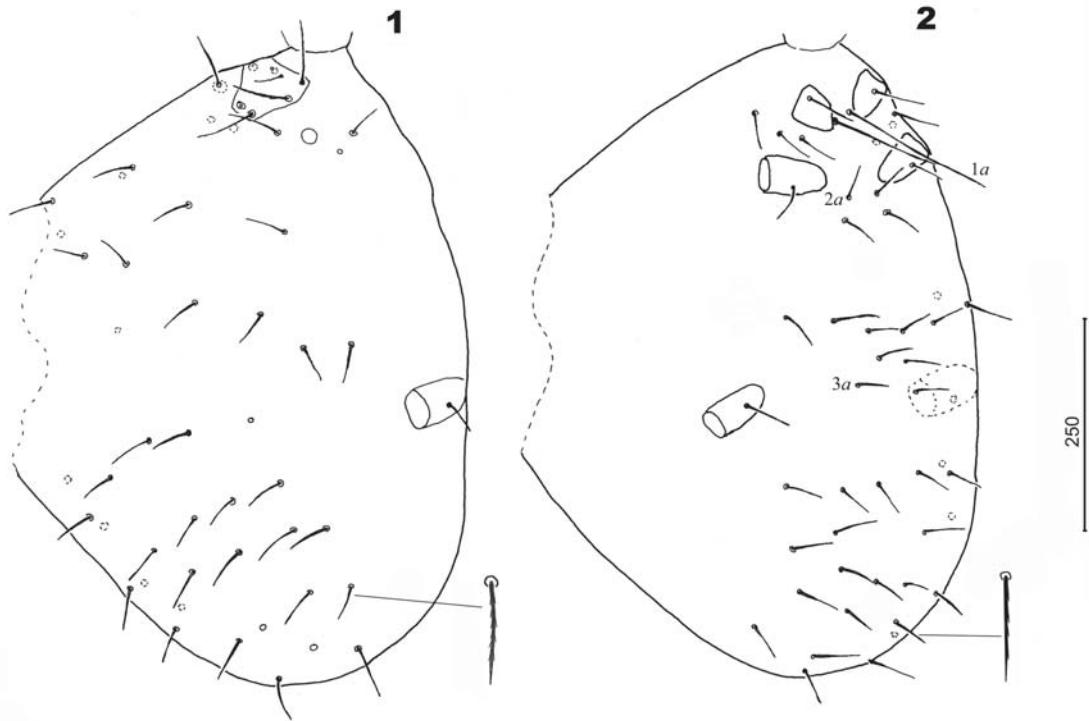
WOHLMANN A., GABRYŚ G. & J. MĄKOL (2007): Terrestrial Parasitengona inhabiting transient biotopes. — In: GERECKE R. (Eds): Süßwasserfauna von Mitteleuropa 7/2-1, Chelicerata, Acari I. Spektrum Elsevier, München [2006]: 158-240.

YAO H., SNIDER R.J. & R.M. SNIDER (2000): Larval and post-larval stages of new *Abrolophus* species (Acari: Erythraeidae) from a deciduous forest in northern Michigan, USA. — Syst. Appl. Acarol. **5**: 149-155.

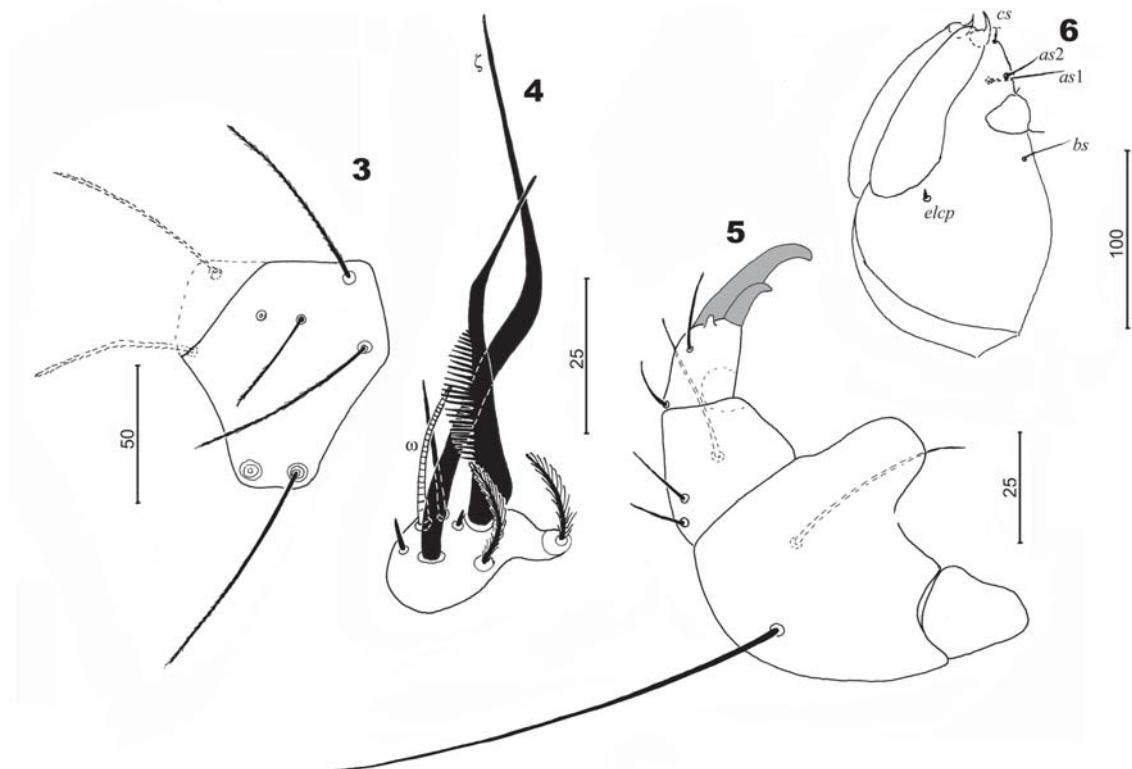
Authors' addresses:

Prof. Dr. habil. Ryszard HAITLINGER  
Institute of Biology, Department of Invertebrate Systematics and  
Ecology, Wrocław  
University of Environmental and Life Sciences  
Kożuchowska 5b  
PL-51-631 Wrocław, Poland  
E-mail: ryszard.haitlinger@up.wroc.pl

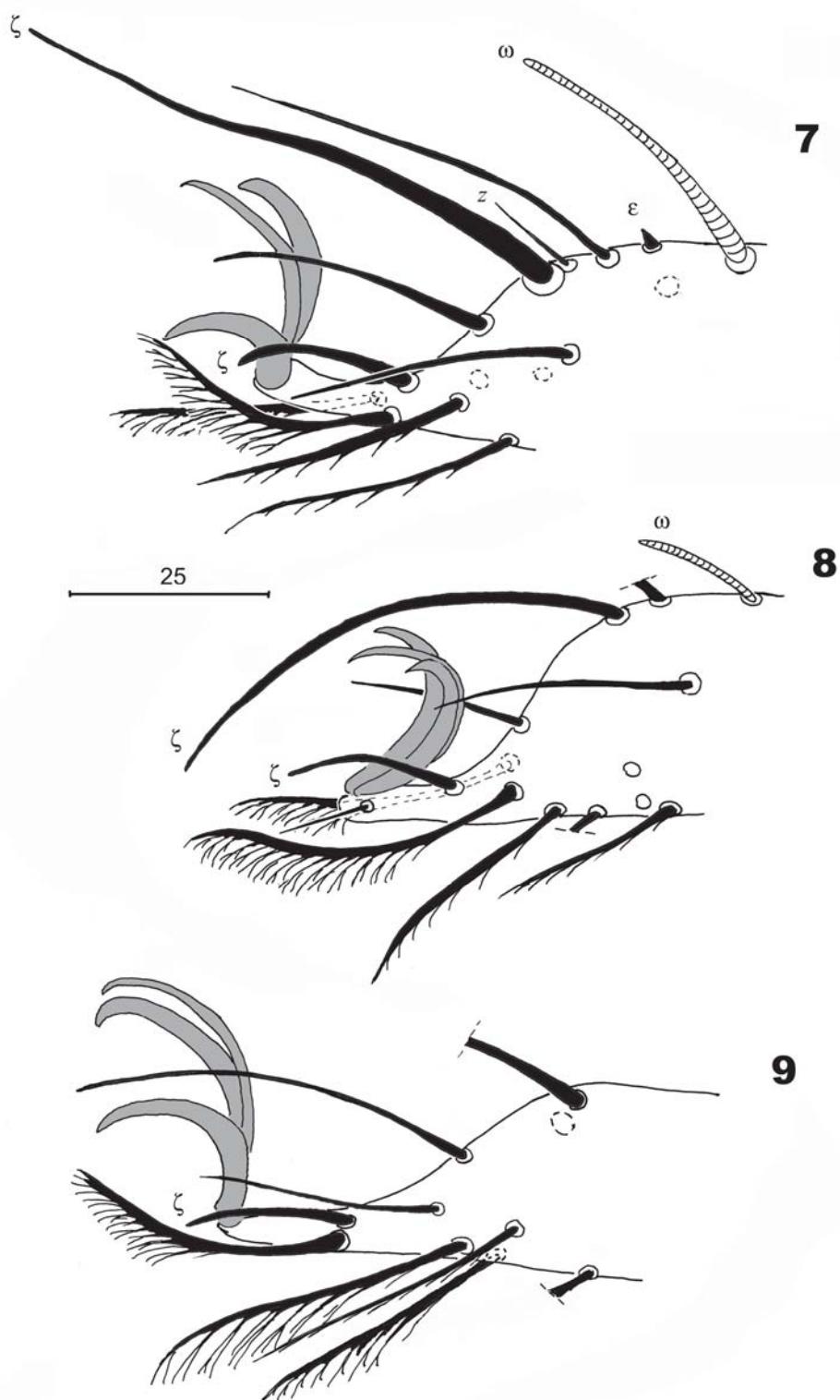
Dr. Dariusz ŁUPICKI  
Wrocław University of Environmental and Life Sciences  
Museum of Natural History  
Chełmońskiego 38D  
PL-51-630 Wrocław, Poland  
E-mail:dariusz.lupicki@up.wroc.pl



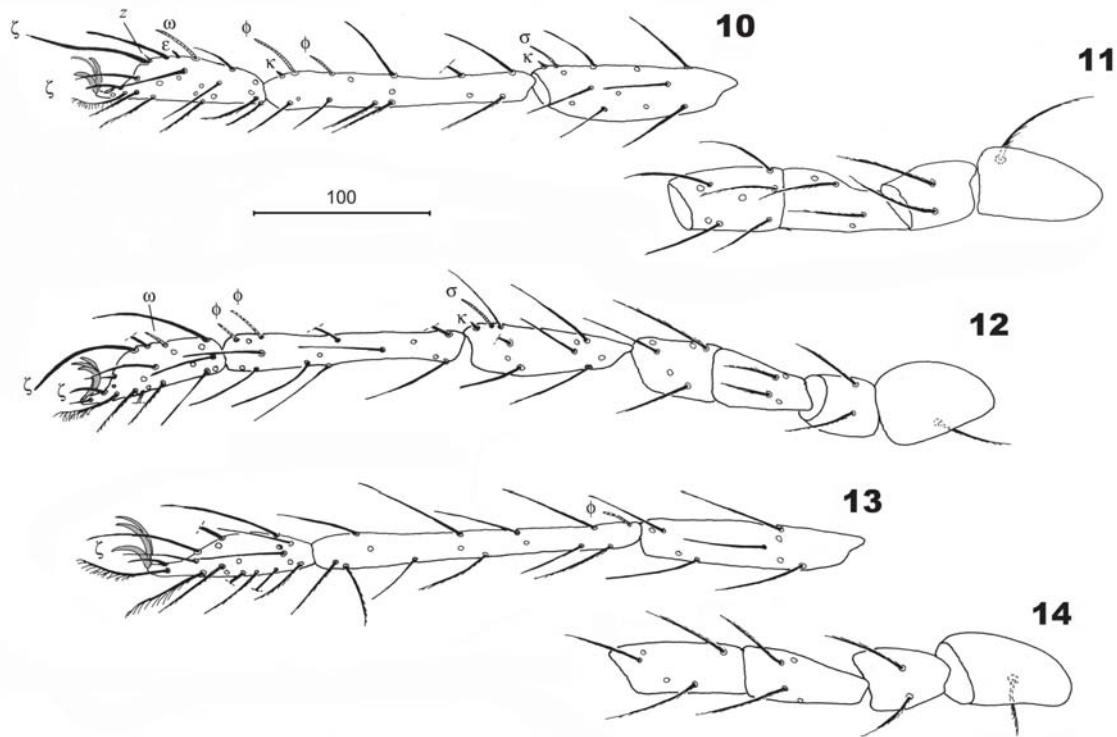
Figs. 1-2. *Abrolophus anzelmii* nov.sp. (1) idiosoma, dorsal view; (2) idiosoma, ventral view.



Figs. 3-6. *Abrolophus anzelmii* nov.sp. (3) scutum; (4) palptarsus; (5) palp; (6) gnathosoma.



**Figs. 7-9.** *Abrolophus anzelmii* nov.sp. (7) distal part of tarsus I; (8) distal part of tarsus II; (9) distal part of tarsus III.



**Figs. 10-14.** *Abrolophus anzelm* nov.sp. (10) leg I, tarsus – genu; (11) leg I, telofemur – coxa; (12) leg II; (13) leg III, tarsus – genu; (14) leg III, telofemur – coxa.

**Table 1.** Metric data for *Abrolophus anzelm* nov.sp.

IL	745	ISD	45	Ta II	91
IW	535	1a	125	Ti II	143
AW	58	1b	71	Ge II	98
PW	68	2bv	48	Tf II	53
AL	72	3b	53	Bf II	72
PL	77	PsFd	104	Tr II	58
ASens	40	PsFv	59	Cx II	95
PSens	70	PsGd	16*	Ta III	100
AP	25	Ta I	106	Ti III	190
AA	14	Ti I	156	Ge III	132
SB	17	Ge I	119	Tf III	81
L	81	Tf I	63	Bf III	80
W	75	Bf I	86	Tr III	72
GL	183	Tr I	64	Cx III	89
DS	43-71	Cx I	79	IP	2007

\*longest dorsal seta